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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,114	04/14/2004	Robert J. Schubert	74238	6446

22242 7590 04/14/2006

FITCH EVEN TABIN AND FLANNERY  
120 SOUTH LA SALLE STREET  
SUITE 1600  
CHICAGO, IL 60603-3406

EXAMINER
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GARBER, CHARLES D

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/824,114	Applicant(s) SCHUBERT ET AL.	
	Examiner Charles D. Garber	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-26 is/are pending in the application.
- 4a) Of the above claim(s) 10-26 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Arguments***

Applicant's arguments filed 03/27/2006 have been fully considered but they are not persuasive. Please see updated discussion of the grounds or rejection below.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Happ et al. (US Patent 6,698,667) in view of Chamings (US Patent 5,906,327).

Regarding claims 1 and 7, Happ et al. (US Patent 6,698,667) discloses a restraint pretensioner. The recitation that the device is "for repetitively simulating forces generated by different pyrotechnic devices on a seat belt system, the testing apparatus" need not be given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not

Art Unit: 2856

depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

Happ further discloses housing 32 houses a pretensioner 6 coupled to an occupant restraint webbing 18 (seat belt system) shown in figure 1.

Happ recites "a small, reciprocating, piston-type pump which draws in **ambient air** and forces it into the **reservoir** until the desired pressure is reached. Subsequent on/off cycles can be used to maintain the reservoir at the desired pressure negating the need for hermetic sealing, which would be particularly difficult for the release valve." Happ also discloses an electronic circuit board 22 which is used to open the valve which allows compressed gas to flow from the reservoir (column 2 lines 57-66).

The aforementioned ambient air is considered equivalent to the actuating fluid supplied to the pretensioner portion and the reservoir is a control portion that stores the actuating fluid at predetermined pressures selected to deliver the fluid to the pretensioner portion as in the instant invention. As for the device "for simulating performance characteristics of pyrotechnic devices on the seat belt system", it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Happ does not expressly teach a retractor and an energy dissipation module between the retractor and the pretension portion.

Chamings discloses a seat belt pretensioner. Chamings teaches a pretensioner portion 400 and a retractor 20 wherein "retractor 20 includes a torsion bar 100 which when twisted also permits the controlled protraction of the seat belt from the spool when loaded by the occupant during a crash". The torsion bar 100 shown in figure 1 is located between the pretensioner and the retractor so that "crash energy" may be "dissipated by the energy needed to twist the torsion bar 100" (column 5 lines 16-33 especially line 30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a retractor which takes up slack to allow a passenger to move with some freedom while the seat belt remains safely close to the passenger. It would have also been obvious to one having ordinary skill in the art at the time the invention was made to provide a torsion bar between the pretensioner and retractor which when twisted advantageously permits the controlled protraction of the seat belt from the spool when loaded by the occupant during a crash.

The references also do not disclose the energy dissipation module (torsion bar 100) is "distinct" from the retractor 20 (the torsion bar is included in the retractor as shown in figure 1 whereas the instant invention drawings show the equivalent parts are separated by belt 14).

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make these parts separable, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichmena*, 168 USPQ 177, 179).

As for preventing impacts against the pretensioner portion during testing operations, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

As for claim 2, all the parts of the device except for a release switch 12 and sensor 2 are within the housing 32. The valve is considered to act fast enough to tension the belt during a crash.

As for claim 3, Happ as discussed above discloses the claimed invention except for the valve shifting between open and closed positions in approximately seven to eight milliseconds. It would have been obvious to one having ordinary skill in the art at the time the invention was made for the valve to shift between open and closed positions in approximately seven to eight milliseconds, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. In this case the general conditions are disclosed by Happ as being responsive to tension a belt quick enough to protect an occupant in during a high speed crash.

As for claim 5, the reservoir discussed above is considered to be the same as an accumulator as in the instant invention.

As for claim 6, the selected fluid pressure in the reservoir will inherently be a linear function of the force applied to the seat belt system via the pretensioner portion.

Art Unit: 2856

The pretension force is caused by the reservoir pressure and must have a linear relative relationship.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Happ et al. (US Patent 6,698,667) as modified by Chamings (US Patent 5,906,327) and applied above to claim 2 and further in view of Jernstrom (US Patent 6,585,295).

The references as applied above do not expressly teach the release valve includes a regulator with the regulator applying a pneumatic signal to the valve.

Jernstrom discloses a pneumatic pretensioner teaching a "spill valve can be set between various degrees of opening and is controlled by a control unit in response to signals from a sensor for sensing the weight of the occupant."

It would have been obvious to one having ordinary skill in the art at the time the invention was made to control the valve opening in response to signals from a sensor for sensing the weight of the occupant. "By regulating the valve opening in relation to the weight of the occupant, the force limitation is regulated relative to the weight of the occupant."

#### ***Allowable Subject Matter***

Claim 9 is allowed.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2856

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 8:00 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles D. Garber  
Primary Examiner  
Art Unit 2856

cdg